

Patent Abstracts of Japan

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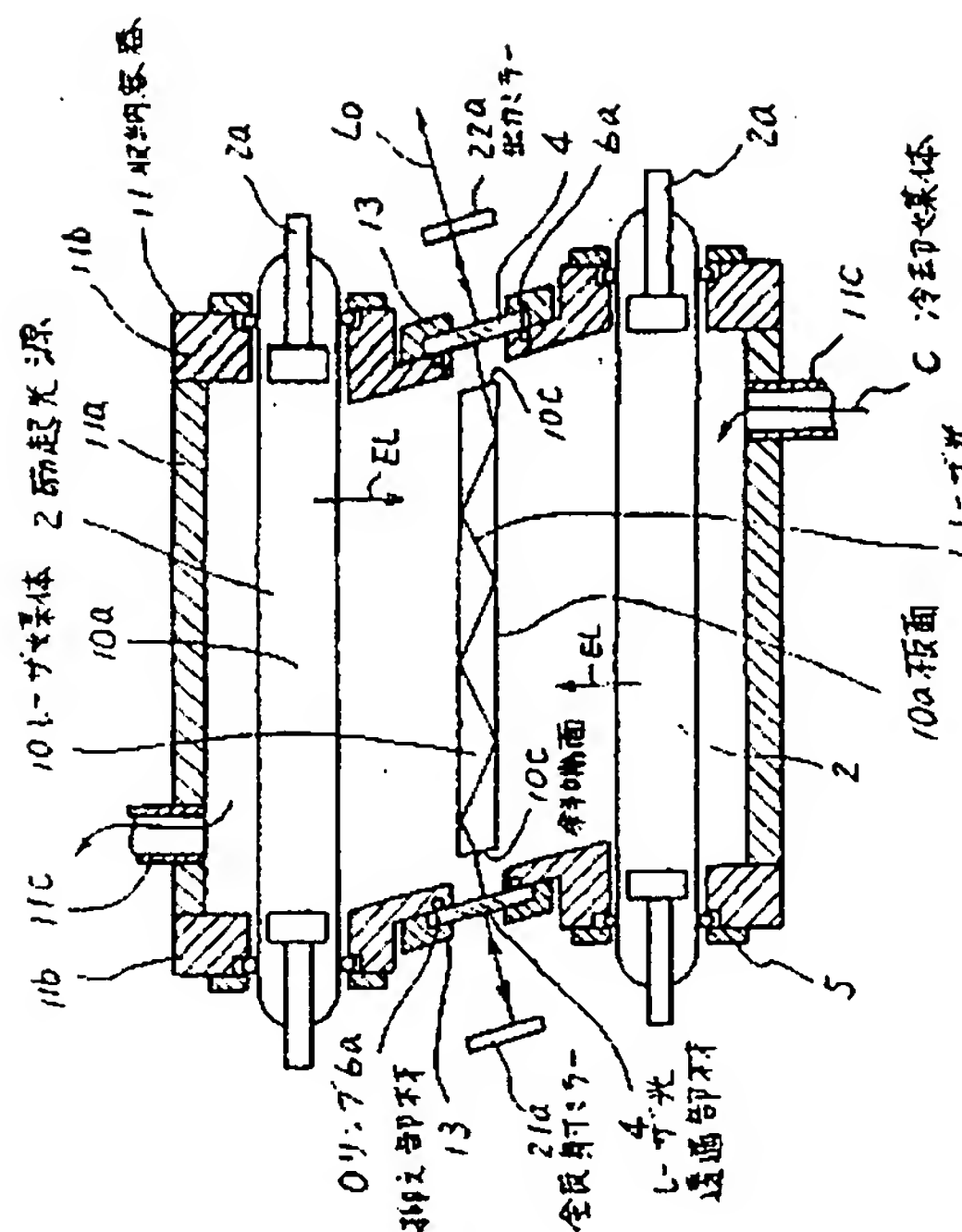
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TITLE : SLAB TYPE SOLID-STATE LASER



ABSTRACT : PURPOSE: To protect a sealing member against burning and to prevent a laser device of this design from deteriorating in laser output due to the overheat of a press member by a method wherein the area of a laser transmitting member is made larger than the crosssectional area of the laser beam, and a sealing material of coolant is arranged encircling the optical path of the laser beam as distant enough from it.

CONSTITUTION: Laser medium 10 is housed in a housing vessel 11 through its overall length so as to enable its slant end face 10a to comes into contact with coolant filled inside the housing vessel 11, and a holder 12 which holds a heat insulator 11 of the side face of the laser medium 10 is formed of metal and fixed to the housing vessel 11 with a bolt or a stud which hermetically penetrating through the side wall of housing vessel main body 11a. A laser beam transmissive member 4 is hermetically held by a press member 13 through the intermediary of an O-ring 6a at a part of the housing vessel 11 opposed to a slant end face 10c of the fixed laser medium 10. The surface area of the laser beam transmissive member 4 is made large as compared with that of the slant end face 10c of the laser medium 10 so as to enable the O-ring 6a to encircle the optical path of laser rays L as distance enough from it, and a sufficiently wide window is provided to the press member 13 which presses the O-ring 6a.

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